Chemical and Petroleum Engineering 2015 vol.50 N11-12, pages 761-765

Neural-Network Modeling of Heat Transfer of Benzene in an Electric Field

Mukhutdinov A., Vakhidova Z.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2015, Springer Science+Business Media New York. A neural-network model allowing for extraction of new knowledge from experimental data is developed on the basis of studies using modern computer technology. Prediction of an output parameter (relative change in coefficient of thermal conductivity) with a relative error of 4% on a network previously trained by means of a knowledge base is demonstrated. Some features and laws of the heat transfer of benzene in an electric field are established.

http://dx.doi.org/10.1007/s10556-015-9974-6

Keywords

artificial neural network, dielectric liquid, electric field, heat transfer, modeling